REMARKS

Applicants request favorable reconsideration of this application in view of the following remarks. Claims 1-4, 7-12, 21-24, and 26-32 were pending in the application and were rejected in the Office Action. By way of this Reply, Applicants have made no amendments and, therefore, claims 1-4, 7-12, 21-24, and 26-32 are respectfully resubmitted for further consideration.

1. Claim Rejections

The Examiner rejected: (a) claims 1, 2, 7-10, 12, 21, 22, 24, and 27-32 under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,876,638 ("Sunder"); (b) claims 3 and 23 under 35 U.S.C. § 103(a) as allegedly being obvious when considering Sunder in view of U.S. Patent No. 6,511,051 ("Kessler"); (c) claim 4 under 35 U.S.C. § 103(a) as allegedly being obvious when considering Sunder in view of U.S. Patent No. 5,413,741 ("Buchholz"); and (d) claims 11 and 26 under 35 U.S.C. § 103(a) as allegedly being obvious when considering Sunder in view of Cooling Tower Institute 1993 Annual Meeting ("CTI"). For at least the following reasons, Applicants respectfully continue to traverse each of these rejections.

As previously presented, claim 1 (*i.e.*, the claim from which claims 2-4, 7-12, 21-24, and 26-28 depend) recites a cooling media pack that includes, among other possible things (italic emphasis added):

> a plurality of alternating sheets each of which comprises:
> a plurality of ridges; and
> a plurality of voids,
> wherein each sheet has an undulating shape,
> wherein the ridges of every other sheet are oriented substantially in a first direction,
> wherein the ridges of the adjacent sheets are oriented substantially in a different direction,
> wherein each of the ridges comprises a peak and a trough,
> wherein the peaks of one sheet are joined to the troughs of a sheet adjacent to it,
> wherein the ridges of each of the sheets are oriented at an angle between about 20° and 30°, with respect to the horizontal, and
> *wherein, the cooling media is configured,* by: (a) a ratio of the area occupied by the voids to the surface area of the sheet; and (b) an angle at which the ridges are oriented with respect to the horizontal, *to be used in: (i) counter-flow film-fill cooling towers; (ii) counter-flow splash-fill cooling towers; and (iii) cross-flow splash-fill cooling towers.*

Similarly, claim 29 (*i.e.*, the claim from which claims 30-32 depend) recites a cooling media pack that includes, among other possible things (italic emphasis added):

> a plurality of alternating sheets each of which comprises:
> a plurality of ridges; and
> a plurality of voids,
> wherein each sheet has an undulating shape,
> wherein the ridges of every other sheet are oriented substantially in a first direction,
> wherein the ridges of the adjacent sheets are oriented substantially in a different direction,
> wherein each of the ridges comprises a peak and a trough,
> wherein the peaks of one sheet are joined to the troughs of a sheet adjacent to it,
> wherein the ridges of each of the sheets are oriented at an angle between about 20° and about 50°, with respect to the horizontal, and
> *wherein the cooling media is configured*, by: (a) a ratio of the area occupied by the voids to the surface area of the sheet; and (b) an angle at which the ridges are oriented with respect to the horizontal, *to be used in: (i) counter-flow film-fill cooling towers; (ii) counter-flow splash-fill cooling towers; and (iii) cross-flow splash-fill cooling towers.*

As hereafter explained, Sunder, Kessler, Buchholz, and CTI (standing alone or in combination) fail to teach or suggest such cooling media packs.

The Examiner asserts, in the "Response to Arguments" section of the Office Action that if "the prior art structure is capable of performing the intended use, then it meets the claim." As explained in the previous response, however, none of the structures disclosed in Sunder, Kessler, Buchholz, and CTI "is capable of performing the intended use" of being used as a cooling media pack in both cross-flow and counter-flow cooling towers. Sunder, *i.e.*, the reference on which each of the rejections is based, explicitly states that its material can not be used in both counter-flow and cross-flow designs. Specifically, Sunder states:

> In many cases, it is advantageous to use a column with its axis along the vertical direction, but the present packing element 1 may also be used where the column axis is not vertical, but is instead in a horizontal or some other intermediate orientation. **However, the relationship between the packing layers, the liquid and vapor flow, and the distributors would have to be maintained as before.**

See Sunder at col. 7, lines 46-53. In other words, although Sunder teaches that the column may be oriented at any angle (*e.g.*, vertical or horizontal), the relationship of the packing layers, liquid and vapor flow, and distributors must stay the same, *i.e.*, if the column is switched, *e.g.*, from vertical to horizontal, the orientation of the packing layers and the liquid/vapor flow must also be switched from vertical to horizontal.

In contrast, the cooling media pack according to the present invention can be used, in **one orientation, in both cross-flow and counter-flow cooling towers**, *i.e.*, there is no need to rotate the cooling media pack. Accordingly, as the cooling media pack is configured to be installed in either a vertical or horizontal orientation in both types of cooling towers, installation is easier and the costs associated with such installation are reduced. This novel aspect of the present invention is discussed in paragraph **[0045]** of the instant application.

The cooling media packs that were tested (and discussed) in CTI are configured only for counter-flow applications. *See, e.g.*, p. 1, lines 1-14. Moreover, although Buchholz teaches a countercurrent distillation column (*see, e.g.*, col. 1, lines 9-18; col. 3, lines 10-12) and Kessler teaches an ordered column packing (*see, e.g.*, Abstract and col. 1, lines 6-7), which are generally configured for use in heat exchange columns, neither Buchholz nor Kessler explicitly teaches or suggests that their cooling pack can be used in both cross-flow and counter-flow cooling towers.

In light of the foregoing, none of Sunder, Kessler, Buchholz and CTI teaches or suggests a cooling media pack that is configured for use in both counter-flow and cross-flow cooling towers. Moreover, the Examiner has failed to identify any structure that is "capable of performing the intended use" of being usable as a cooling media pack in both counter-flow and cross-flow cooling towers. As a result, Sunder, Kessler, Buchholz and/or CTI (standing alone or in combination) can not be used to reject claims 1 and 29, or any claim dependent thereon, under 35 U.S.C. §§ 102(b), 103(a). Moreover, as claims 2-4, 7-12, 21-24, and 26-28 depend from claim 1 and as claims 30-32 depend from claim 29, each of these dependent claims is also allowable over Sunder, Kessler, Buchholz and/or CTI (standing alone or in combination). Accordingly, Applicants respectfully request a withdrawal of the rejections of claims 1-4, 7-12, 21-24, and 26-32 under §§ 102(b), 103(a).

2. Inventorship

Applicants' undersigned counsel recently learned that one of the named inventors is not, in fact, an inventor. Specifically, upon a further review of the claims, it appears that David M. Kinder should not have been listed as an inventor. To remediate this problem, upon receiving a favorable response from the Examiner regarding the allowability of the claims, Applicants will file a continuation application under 37 C.F.R. § 1.53(b) along with a copy of the previously signed Oath and Declaration and a statement that Mr. David M. Kinder is to be removed as an inventor, as provided in 37 C.F.R. § 1.63(d)(2), thereby correctly identifying only Messrs. Philip W. Tweeton and Randy J. White as inventors.

CONCLUSION

Claims 1-4, 7-12, 21-24, and 26-32 are now in condition for allowance. A Notice of Allowance at an early date is respectfully requested. The Examiner is invited to contact the undersigned if such communication would expedite the prosecution of the application.

Respectfully submitted,

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